

Report on the specimens of order Lampridiformes (Teleostei) deposited in the Department of Zoology, the University Museum, the University of Tokyo

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Abstract

The collection of Lampridiformes (Teleostei) held in the Department of Zoology, The University Museum, The University of Tokyo (ZUMT) comprise in total 46 specimens representing 12 species of four families. A holotype of *Trachipterus misakiensis* Tanaka, 1908 recognized in the collection (ZUMT 960), but could not find. A single specimen of unidentified species of genus *Desmodema* was discovered from the collection. The morphological information of the ZUMT lampriforms specimens observed in this study is described as more as possible.

Introduction

Lampridiformes comprises six families, Lampridae, Veliferidae, Lophotidae, Radiicephalidae, Trachipteridae, and Regalecidae. Although the family Stylephoridae has historically placed among Lampriformes, the recent study using the DNA sequence analysis revealed that the family is instead a close parent of the order Gadiformes (Miya et al. 2007; Dornburg and Near 2021). Most of the lampriforms fishes, except for Veliferidae, inhabit in pelagic deep sea, and rarely appear in the coastal waters. Five families, except for Radiicephalidae which only known from Taiwan in the western Pacific (Koeda and Ho 2018), have known from Japanese waters. Species of Lampridae and Veliferidae have dick-shaped bodies, and the other four families have ribbon-shaped bodies. Family Trachipteridae is the most species-diverse group in the order, and containing a lot of taxonomical confusions. Martin and Hilton (2021) taxonomically reviewed the family in the western Pacific, and recognized two species of both *Zu* Walters & Fitch, 1960 and *Desmodema* Walters & Fitch, 1960, and possibly five species of *Trachipterus* Goüan, 1770. They described the detailed morphology of two species of both *Zu* and *Desmodema*, however, could not show the morphological differences between the five species of *Trachipterus*, due to great ontogenetic variation and lack of specimen numbers on this taxon.

The fish collection of Lampridiformes (Teleostei) which preserved in the Department of Zoology, The University Museum, The University of Tokyo (ZUMT) were re-identified in the present study. The morphological information of the ZUMT lampriforms specimens observed in this study is described herein to be a basic data for the future taxonomic studies on this group.

Materials and Methods

The specimens of Lampridiformes in ZUMT were re-identified in the present study, generally following Martin and Hilton (2021), together with Hayashi and Senou (2013) on the genus *Trachipterus*, and confirmation of at least one diagnostic character. The standard length (SL) of the specimens were measured for all specimens. Snout-vent length were also measured for most specimens because many specimens lacking caudal part of body. Vertebrae of some large-sized specimens were counted from computed tomography scans.

Species are arranged in alphabetical order by species name. Japanese were given in parentheses for local name and personal name when these are written in Japanese in the specimen ledger or tags. The list contains ZUMT number, SL, collection locality, collection date, collector or donator, collection method, and remarks when available. The collection year and collector for some specimens was estimated by following Koeda et al. (2022). Although, some of the ZUMT specimens collected by Dr. Abe had not been formally cataloged into the ZUMT collection (and the data of some specimens not retained), such specimens which can recognize by having underbar with the number on the accompanying label, are listed herein with the number ZUMT ABE XXXX, due to the possibility of future discovery of Dr. Abe's remaining catalog books with collection data.

Collection of Lampridiformes in ZUMT

Although ZUMT 960 is recognized as a holotype of *Trachipterus misakiensis* Tanaka, 1908, the specimen could not find from the collection. This species is regarded as a junior synonym of *D. polystictum* (Martin and Hilton 2021). Examination of the specimens of Lampridiformes deposited at ZUMT disclosed eight specimens of two species of Veliferidae, five specimens of two species of Lophotidae, 25 specimens of seven species (including two unidentified species) of Trachipteridae, and six specimens of a single species of Regalecidae.

The veliferids specimens of *Velifer hypselopterus* Bleeker, 1879 from Namerikawa, Toyama Pref. and *Metavelifer multiradiatus* (Regan, 1907) from Totoro, Nobeoka, Miyazaki Pref., represent the first records of the species from the prefectures, respectively. In addition, the specimens of *Desmodema lorum* Rosenblatt & Butler, 1977 from Okinose at off Tokyo Bay and Hachijo-jima Island represent the first records from each area. The morphology of a single specimen of *Desmodema* which collected from Hakodate, Hokkaido, differed from known two species of the genus. Further detailed comparison of specimens is needed for accurate identification of this specimen.

Veliferidae クサアジ科

Velifer Temminck & Schlegel, 1850 クサアジ属

Velifer hypselopterus Bleeker, 1879 クサアジ

ZUMT 9589: 108.1 mm SL, Kisyu-Tanabe (紀州田辺), Wakayama Pref., N. Ui (宇井縫蔵), good in condition.

Count characters: D II, 33; A I, 23; P₁ 16; P₂ 8.

ZUMT 45470: 127.8 mm SL, Namerikawa (滑川), Uwozu (魚津), Toyama Pref., I. Tomiyama, good in condition.

Count characters: D II, 33; A I, 23; P₁ 16; P₂ 8.

Remarks: The present specimen represents the first record of the species from Toyama Pref.

ZUMT 52194: 155.6 mm SL, Totoro (土々呂), Nobeoka (延岡), Miyazaki Pref., Aug. 1960, donated from Nankai Regional Fisheries Research Laboratory (南海区水産研究所), good in condition.

Count characters: D II, 33; A I, 23; P₁ 16; P₂ 8.

ZUMT 62268 [sketch no. 83 (写生第八十三号)]: 98.5 mm SL, locality unknown.

Count characters: D I, 33; A I, 23; P₁ 15; P₂ 8.

ZUMT 62271: 163.4 mm SL, locality unknown.

Count characters: D I, 33; A I, 23; P₁ 16; P₂ 8.

ZUMT ABE 59-653: 70.1 mm SL, locality unknown, good in condition.

Count characters: D I, 33; A I, 24; P₁ 16; P₂ 8.

ZUMT ABE 10180: 252.0 mm SL, Hatsu-shima Island (初島), Sagami Bay, Shizuoka Pref., 14 Jan 1955, T. Hirai (平井敏治), good in condition.

Count characters: D II, 33; A I, 25; P₁ 16; P₂ 8; LLs 72.

Metavelifer Walters, 1960 ヒメクサアジ属

Metavelifer multiradiatus (Regan, 1907) ヒメクサアジ

ZUMT 52195 (cloth tag of 118): 131.1 mm SL, Totoro, Nobeoka, Miyazaki Pref., Aug. 1960, donated from Nankai Regional Fisheries Research Laboratory (南海区水産研究所), good in condition.

Count characters: D XXIII, 21; A XVII, 18; P₁ 16; P₂ 9.

Remarks: Although Murase et al. (2021) reported 815 fish species in their fish faunal study around Nobeoka Miyazaki, this species was not reported. Therefore, the present specimen represents the first record of the species from Miyazaki Pref.

Lophotidae アカナマダ科

Lophotus Giorna 1809 アカナマダ属

Lophotus capellei Temminck & Schlegel, 1845 アカナマダ

ZUMT 39281: 255.2 mm SL, snout-vent length 231.0 mm, Gobou (御坊), Wakayama Pref., K. Okamoto (岡本 清) at Hidaka Wakayama Prefectural Junior Highschool (和歌山県立日高中学校).

Remarks: Skin of near anus soiled by black ink-like fluid. This may be evidence of that even these small-sized individuals can discharge ink-like fluid when alarmed.

ZUMT 62220: 1071.3 mm SL, snout-vent length 954.8 mm, off Cape Muroto, Kochi Pref., good in condition.

Count characters: D I, 233 (I, 172 before anus); A 22; P₁ 15; P₂ 0; C 5+9; GR 4+8; V 130.

Measurement characters: body depth 17.6% SL; head length 14.4% SL; snout length 24.9% HL; eye diameter 38.0% HL.

Eumecichthys Regan, 1907 テングノタチ属
Eumecichthys fiski (Günther, 1890) テングノタチ

ZUMT 22404: 650.1 mm SL, snout-vent length 593.0 mm, probably Japan (detail unknown), good in condition, donated from Yamakoshi Kosakusyo (山越工作所) to S. Tanaka.

Count characters: D 313 (280 before anus); A 7; P₁ 14; P₂ 0; C 11+1; GR 4+7.

Measurement characters: body depth 3.2% SL; head length 5.4% SL; snout length 25.0% HL; eye diameter 24.4% HL; preoral length 102.0% HL; pectoral-fin length 2.0% SL; caudal-fin length 4.8% SL.

Remarks: Skin of near anus soiled by black ink-like fluid.

ZUMT 39282: 1115.7 mm SL, snout-vent length 1105.3 mm, Gobou, Wakayama Pref., K. Okamoto at Hidaka Wakayama Prefectural Junior High School, probably stranded.

Count characters: D 313 (280 before anus); A 7; P₁ 14; P₂ 0; C 11+1; GR 4+7.

Measurement characters: body depth 4.1% SL; head length 6.3% SL; snout length 22.6% HL; eye diameter 24.0% HL; preoral length 89.1% HL; pectoral-fin length 2.2% SL; caudal-fin length 3.4% SL.

ZUMT 47824: 682.5 mm SL, snout-vent length 665.0 mm, probably Japan (detail unknown), good in condition, donated from Yamakoshi Kosakusyo (山越工作所) to S. Tanaka.

Count characters: D 310 (277 before anus); A 8; P₁ 14; P₂ 0; C 11+1; GR 4+6.

Measurement characters: body depth 9.1% SL; head length 16.7% SL; snout length 25.2% HL; eye diameter 23.5% HL; preoral length 102.8% HL; pectoral-fin length 5.7% SL; caudal-fin length 9.4% SL.

Remarks: The detail description and photograph. Japanese name of this specimen shown by Abe (1954). Although Abe (1954) mentioned that a single specimen of this species which collected near Hagi, Yamaguchi Pref. on Oct. to Nov. 1937, was donated from Ichiro Tanaka (田中市郎) to Shigeho Tanaka, the specimen may not deposited in ZUMT.

Trachipterus Goüan, 1770 サケガシラ属

Trachipterus fukuzakii Fitch, 1964

ZUMT 49052: 1661 mm SL, snout-vent length 791.5 mm, central North Pacific (28–30° N, 160° W), 100–150 m depth, water temperature 24°C, collected by M. Shinohara (篠原勝) boarded on training vessel of Toyama Prefectural Fisheries Highschool (富山縣立水産高等学校練習船), donated to I. Tomiyama (富山一郎).

Count characters: D 161 (73 before anus); A 0; P₁ 14; P₂ 0; C 6+2; GR 4+8; V 78; lateral-line scales 105; scales between lateral line and anus 31.

Measurement characters: body depth 14.0% SL; head length 14.2% SL; snout length 5.7% HL; eye diameter 25.2% HL; pectoral-fin length 6.1% HL; caudal-fin length 0.9% SL.

Remarks: A whole fish of probably *Anotopterus nikparini* Kukuev, 1998 (Anotopteridae) in the stomach could be observed from the X-ray.

Trachipterus ishikawae Jordan & Snyder, 1901 サケガシラ

ZUMT 62634: 1135.4 mm SL, snout-vent length 603.8 mm, Kagoshima, 1912.

Count characters: D more than 187 (84 before anus); A 0; P₁ 13; P₂ 5; GR 3+8.

Measurement characters: body depth 12.3% SL; head length 11.2% SL; snout length 40.8% HL; eye diameter 30.2% HL; pectoral fin length 4.6% HL.

Remarks: A cloth tag with “locality name unknown”.

ZUMT ABE 61-1213: 1576.7 mm SL, snout-vent length 716.0 mm, Manazuru (真鶴), Kanagawa Pref., Dec. 1961, T. Abe (阿部宗明).

Count characters: D 190 (79 before anus); A 0; P₁ 12; P₂ 0; GR 5+8; V 84; lateral-line scales 99; scales between lateral line and anus 25.

Measurement characters: body depth 11.1% SL; head length 13.0% SL; snout length 36.9% HL; eye diameter 27.1% HL; pectoral-fin length 5.0% SL; caudal-fin length 1.2% SL.

Trachipterus trachipterus (Gmelin, 1789) テンガイハタ

ZUMT 18854: 222.7+ mm SL, snout-vent length 155.0 mm, Kagoshima.

Count characters: D 82 before anus; A 0; P₁ 13; P₂ 6; GR 3+8.

Measurement characters: snout length 42.4% HL; eye diameter 31.3% HL.

ZUMT 62265: 82.1 mm SL, snout-vent length 54.6 mm, locality unknown.

Count characters: D 171 (76 before anus); A 0; P₁ 11; P₂ 6; C 8; GR 3+9.

Measurement characters: body depth 19.3% SL; head length 18.5% SL; snout length 27.9% HL; eye diameter 35.3% HL; pectoral-fin length 5.5% SL; pelvic-fin length 5.6% SL; caudal-fin length 46.4% SL.

ZUMT 62232: 669.5 mm SL, snout-vent length 284.0 mm, locality unknown.

Count characters: D 183 (82 before anus); A 0; P₁ 12; P₂ 5; C 9+5; GR 3+7.

Measurement characters: body depth 9.7% SL; head length 10.6% SL; snout length 34.4% HL; eye diameter 32.2% HL; caudal-fin length 8.4% SL.

ZUMT 63930: 118.3 mm SL, snout-vent length 75.4 mm, locality unknown.

Count characters: D 169 (73 before anus); A 0; P₁ 9; P₂ 6; C 8+6.

Measurement characters: body depth 30.0% SL; head length 25.7% SL; snout length 47.3% HL; eye diameter 36.1% HL; pectoral-fin length 7.0% SL; pelvic-fin length 56.6% SL; caudal-fin length 62.5% SL.

ZUMT ABE 10675: 164.3 mm SL, snout-vent length 112.0 mm, Urayasu (浦安), Chiba Pref., A. Akae (アカエ アリヒト), Oct. 1954.

Count characters: D 179 (81 before anus); A 0; P₁ 13; P₂ 6; C 9+5; GR 3+8.

Measurement characters: body depth 17.8% SL; head length 17.3% SL; snout length 31.6% HL; eye diameter 35.1% HL; pectoral-fin length 8.2% SL; pelvic-fin length 16.3% SL; caudal-fin length 33.2% SL.

ZUMT ABE 61-114: 2 specimens, 55.4 mm SL, snout-vent length 39.6 mm; 66.1 mm SL, snout-vent length 46.4 mm, Manazuru, Kanagawa Pref., 26 Dec. 1960, T. Abe.

Specimen 1: 55.4 mm SL

Count characters: D 169 (79 before anus); A 0; P₁ 11; P₂ 5; C 8+7; GR 3+10.

Measurement characters: body depth 20.9% SL; head length 23.9% SL; snout length 31.7% HL; eye diameter 33.2% HL; caudal-fin length 47.7% SL.

Specimen 2: 66.1 mm SL

Count characters: D 170 (79 before anus); A 0; P₁ 11; P₂ 5; C 8+5; GR 3+10.

Measurement characters: body depth 25.6% SL; head length 20.1% SL; snout length 39.2% HL; eye diameter 27.9% HL; pelvic-fin length 45.4% SL; caudal-fin length 47.5% SL.

***Trachipterus* sp.** サケガシラ属の一種

ZUMT ABE 59-125: 1455.5 mm SL, snout-vent length 690.6 mm, locality unknown.

Remarks: The present specimen differs from three species of *Trachipterus* listed above in having higher counts of gill rakers (4+12=16 vs. 3-5+6-10=10-13 in other three species) and scale rows below lateral line at anus (45 vs. 25 in *T. ishikawae*, 31 in *T. fukuzakii*), and fewer pectoral fin rays (9 vs. 11-13 in other three species).

Count characters: D 185 (79 before anus); A 0; P₁ 9; P₂ 0; C 8+3; GR 4+12; V 89 (precaudal vertebrae 53); scales between lateral line and anus 45.

Measurement characters: body depth 13.0% SL; head length 13.4% SL; snout length 38.6% HL; eye diameter 33.7% HL; pectoral-fin length 4.4% SL; caudal-fin length 5.2% SL.

Desmodema Walters & Fitch, 1960 フリソデウオ属
Desmodema lorum Rosenblatt & Butler, 1977 オキフリソデウオ

ZUMT 1348: 159.7 mm SL, snout-vent length 107.4 mm, surface at Okinose (沖の瀬) at off Tokyo Bay (東京湾), 7 Mar. 1902, K. Aoki (青木熊吉).

Count characters: D 160 (67 before anus); A 0; P₁ 14; P₂ 9; C 8; GR 3+10.

Measurement characters: body depth 30.0% SL; head length 16.6% SL; snout length 30.6% HL; eye diameter 35.3% HL; pectoral-fin length 8.8% SL; pelvic-fin length 32.0% SL; caudal-fin length 10.1% SL.

Remarks: The present specimen represents the first record of the species from this area.

ZUMT 19470: 1167.6 mm SL, snout-vent length 309.9 mm, Hachijo-jima Island (八丈島), Y. Oshitsu (押津義雄).

Count characters: D 191 (56 before anus); A 0; P₁ 14; C 7; GR 3+9.

Measurement characters: body depth 11.8% SL; head length 8.2% SL; snout length 42.5% HL; eye diameter 28.0% HL; pectoral-fin length 1.3% SL; caudal-fin length 0.4% SL.

Remarks: The present specimen represents the first record of the species from this island.

ZUMT 33385: 83.4 mm SL, snout-vent length 59.2 mm, surface at Okinose at off Tokyo Bay, Dec. 1904, K. Aoki.

Count characters: D 168 (63 before anus); A 0; P₁ 14; P₂ 11; C 8; GR 3+10.

Measurement characters: body depth 30.5% SL; head length 20.3% SL; snout length 31.7% HL; eye diameter 26.3% HL; pectoral-fin length 12.7% SL; pelvic-fin length 72.8% SL; caudal-fin length 13.8% SL.

Remarks: The present specimen represents the first record of the species from this area.

ZUMT 49093: 125.3 mm SL, snout-vent length 92.7 mm, Fordata Island (written as Vordata Island), Tanimbar Islands, Indonesia, 31 Nov. 1955, Z. Maekawa (前川善四郎) and T. Suzuki (鈴木貞次郎).

Count characters: D 163 (64 before anus); A 0; P₁ 13; P₂ 9; C 7; GR 3+9.

Measurement characters: body depth 34.9% SL; head length 17.5% SL; snout length 34.0% HL; eye diameter 36.7% HL; pectoral-fin length 7.9% SL; caudal-fin length 9.4% SL.

ZUMT 62635: snout-vent length 337.6 mm (tip of caudal lost), locality unknown.

Count characters: D more than 134 (58 before anus); A 0; P₁ 15; GR 4+9.

Measurement characters: body depth 9.8% SL.

Desmodema polystictum (Ogilby, 1898) フリソデウオ

Remarks: Although Tanaka (1908) described *Trachypterus misakiensis* Tanaka, 1908 with a holotype collected from Misaki, Kanagawa Pref. and three paratypes, the types were not found in the present examination. *Trachypterus misakiensis* is regarded as a junior

synonym of *D. polystictum* (Martin and Hilton 2021).

ZUMT 5224: 61.6 mm SL, snout-vent length 44.8 mm, Misaki, Kanagawa Pref., 1890–1910.
Count characters: D 131 (64 before anus); A 0; P₁ 12; P₂ 9; C 8; GR 3+9.

Measurement characters: body depth 31.6% SL; head length 19.2% SL; snout length 33.8% HL; eye diameter 37.9% HL; pectoral-fin length 13.1% SL; pelvic-fin length 120.3% SL.

ZUMT 22655: 170.4+ mm SL, snout-vent length 108.9 mm, Kisyu-tanabe (紀州田邊), Wakayama Pref., Dec. 1920.

Count characters: D 123 (59 before anus); A 0; P₁ 13; P₂ 9; GR 3+10.

Measurement characters: snout length 35.5% HL; eye diameter 37.0% HL.

ZUMT 34641: 147.9 mm SL, snout-vent length 104.2 mm, Kochi, T. Kamohara (蒲原稔治) at Kochi Highschool (高知高等学校).

Count characters: D more than 134 (65 before anus); A 0; P₁ 12; P₂ 9; GR 3+10.

Measurement characters: body depth 31.0% SL; head length 16.2% SL; snout length 33.8% HL; eye diameter 39.2% HL; pectoral-fin length 4.0% SL.

ZUMT 49120: 107.0 mm SL, snout-vent length 75.6 mm, Misaki (三崎), Kanagawa Pref., 1956, I. Tomiyama.

Count characters: D more than 106 (64 before anus); A 0; P₁ 14; P₂ 9; C 8; GR 3+10.

Measurement characters: body depth 31.8% SL; head length 18.7% SL; snout length 26.6% HL; eye diameter 39.3% HL; pectoral-fin length 10.1% SL; pelvic-fin length 89.3% SL; caudal-fin length 11.4% SL.

ZUMT ABE 60-1550: 180.8 mm SL, snout-vent length 121.0 mm, locality unknown.

Count characters: D 141 (63 before anus); A 0; P₁ 11; P₂ 9; C 10; GR 3+9.

Measurement characters: body depth 28.4% SL.

***Desmodema* sp.**

ZUMT 39283: 658.9 mm SL, snout-vent length 340.0 mm, Hakodate (函館), Hokkaido (北海道), 1935–1941, T. Hikita (疋田豊治) at Hakodate Fisheries Highschool (函館高等水産学校).

Count characters: D 47 before anus; A 0; P₁ 15; P₂ 9; GR 4+10; V 74 (precaudal vertebrae 45).

Measurement characters: body depth 15.1% SL; head length 15.6% SL; snout length 54.7% HL; eye diameter 25.3% HL; pectoral-fin length 2.2% SL.

Remarks: The present specimen differs from two species of *Desmodema* listed above in having fewer dorsal-fin rays (47 before vent vs. 56–67 in two species), longer snout (54.7% HL vs. 26.6–42.5% HL), and slender and longer gill rakers on first gill arch (vs. thick and short). Toyoji Hikita was a professor at Hakodate Fisheries Highschool from 1935 to 1943.

Zu Walters & Fitch 1960 ヌキフリソデウオ属
Zu cristatus (Bonelli, 1820) ヌキフリソデウオ

ZUMT 2104: 415.5 mm SL, snout-vent length 181.2 mm, off Kishiwada (岸和田沖), Osaka Pref., 1904, donated from K. Sato (佐藤亀一) at Kagawa Prefectural Okawa Junior Highschool (香川県大川中学校).

Count characters: D 149 (51 before anus); A 0; P₁ 11; P₂ 7; C 9+2; GR 3+8.

Measurement characters: body depth 22.5% SL; head length 15.3% SL; snout length 34.4% HL; eye diameter 43.9% HL; pectoral-fin length 8.0% SL; pelvic-fin length 23.9% SL; caudal-fin length 18.7% SL.

Remarks: The present specimen described and illustrated by Tanaka (1915) as *Trachypterus ijimae* Jordan & Snyder, 1901 which is a junior synonym of *Zu cristatus*.

ZUMT 24562: 575.1 mm SL, snout-vent length 234.1 mm, Toyama Pref., specimen received at 9 Apr. 1932, Toyama Prefectural Fisheries Institute.

Count characters: D 146 (50 before anus); A 0; P₁ 11; P₂ 6; C 9+3; GR 3+9.

Measurement characters: body depth 25.4% SL; head length 14.2% SL; snout length 28.6% HL; eye diameter 40.6% HL; pectoral-fin length 6.3% SL; pelvic-fin length 23.5% SL; caudal-fin length 18.3% SL.

ZUMT 62270: 343.9 mm SL, snout-vent length 157.5 mm, Misaki, before 1913.

Count characters: D 140 (51 before anus); A 0; P₁ 11; P₂ 6; C 9+2; GR 3+8.

Measurement characters: body depth 23.6% SL; head length 16.6% SL; snout length 34.0% HL; eye diameter 35.0% HL; pectoral-fin length 5.8% SL; pelvic-fin length 55.5% SL; caudal-fin length 22.3% SL.

Regalecidae リュウグウノツカイ科
Regalecus Ascanius, 1772 リュウグウノツカイ属
Regalecus russellii (Cuvier, 1816) リュウグウノツカイ

ZUMT 52971: 1875.0+ mm SL, snout-vent length 933.0 mm, East China Sea, collected at bottom trawl fish landing area at Fukuoka Fish Market, 12 Jan. 1974, Y. Tominaga (富永義昭).

Count characters: D more than 147 (78 before anus); A 0; P₁ 14; P₂ 1; GR 12+42.

Measurement characters: eye diameter 17.4% HL.

ZUMT 62633: 895.5+ mm SL, snout-vent length 247.1 mm, locality unknown.

Count characters: D 71 before anus; A 0; P₁ 12; P₂ 1; GR 11+43.

Measurement characters: snout length 25.4% HL; eye diameter 23.3% HL.

ZUMT ABE 59-31: 367.4+ mm SL, snout-vent length 231.5 mm, locality unknown.

Count characters: D 71 before anus; A 0; P₁ 13; P₂ 1; GR 12+40.

ZUMT ABE 59-683: 323.1+ mm SL, snout-vent length 209 mm, locality unknown.
Count characters: D 67 before anus; A 0; P₁ 14; P₂ 1; GR 12+44.

ZUMT ABE 60-1151: 1437.5 mm SL, snout-vent length 378.5 mm, locality unknown.
Count characters: D 325 (83 before anus); A 0; P₁ 12; P₂ 1; C 4; GR 12+45.
Measurement characters: body depth 5.2% SL; head length 6.3% SL; snout length 26.3% HL;
eye diameter 21.2% HL.

ZUMT ABE 60-1152: 623.3+ mm SL, snout-vent length 406.5 mm, locality unknown.
Count characters: D 76 before anus; A 0; P₁ 14; P₂ 1; GR 12+44.
Measurement characters: snout length 22.7% HL; eye diameter 22.1% HL.

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